## WHAT IS CLAIMED IS:

1.   A method for extracting commands and acoustic data in a same utterance, comprising the steps of:

decoding at least one word in acoustic data representing an acoustic signal that comprises a human utterance and determining acoustic word boundaries within the acoustic data;

extracting at least one command in a decoded utterance; and

identifying acoustic data segments in the utterance based on the acoustic word boundaries.

2.   The method as recited in claim 1, wherein the step of determining acoustic word boundaries includes finding segment boundaries by iteratively comparing the same utterance to a plurality of vocabularies.

3.   The method as recited in claim 1, further comprising the step of executing the at least one command from the decoded utterance.

4. The method as recited in claim 3, further comprising at least one of storing the acoustic data segments and using the acoustic data segments in executing the at least one command.

5. The method as recited in claim 3, further comprising the step of submitting at least one non-command voice data segment for recognition using the recognizer vocabulary.

6. The method as recited in claim 1, further comprising the step of changing a recognizer vocabulary.

7. The method as recited in claim 1, further comprising the step of submitting the acoustic data segments for recognition when computing resources are available.

8. The method as recited in claim 1, wherein the

-39-

step of extracting at least one command from the utterance includes employing one or more grammars to distinguish the command.

9.   The method as recited in claim 8, wherein the grammars include a form for extracting information for an order or verbal contract.

10.   The method as recited in claim 8, wherein the grammars include a form for reminding a user to perform a task.

11.   The method as recited in claim 8, wherein the grammars include a form for extracting maximum meaningful length segments under interruption or silence conditions.

12. The method as recited in claim 8, wherein the step of using grammars includes the step of associating at least one grammar label with the corresponding segment of acoustic data that has been decoded into a command.

13. The method as recited in claim 12, wherein the label includes a numerical value associated with each command.

5

14. The method as recited in claim 1, further comprising the step of executing the at least command in the utterance using undecoded acoustic data from within the same utterance.

10

15. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for processing commands and voice data in a same utterance as recited in claim 1.

15

16. A method for recognizing at least one command and at least one segment of acoustic voice data in a same utterance comprising the steps of:

decoding at least one word in voice data representing the acoustic signal that comprises a human utterance and

20

determining the acoustic word boundaries within the voice

-41-

data;

extracting at least one command from the utterance;

associating segments in the voice data based on the

acoustic word boundaries with labels.

5

17.  The method as recited in claim 16, wherein the

step of extracting includes employing an application, which

identifies commands in the utterance in accordance with the

labels.

10

18.  The method as recited in claim 16, further

comprising the step of executing the at least one command

utilizing undecoded information in the acoustic voice data.

15    19.  The method as recited in claim 16, wherein the

step of extracting includes the step of storing at least

one non-command voice data segment.

20.  The method as recited in claim 16, wherein the

20    step of extracting includes calling a vocabulary for

recognizing numbers and recognizing the numbers in the utterance.

21.  The method as recited in claim 16, wherein the step of extracting includes extracting acoustic data based on word boundaries and saving the acoustic data for acoustically rendering the acoustic data.

22.  The method as recited in claim 16, wherein the step of extracting includes extracting acoustic data based on word boundaries and decoding the acoustic data for storage.

23.  The method as recited in claim 16, wherein the step of associating includes the step of changing a recognizer vocabulary and submitting at least one non-command voice data segment for recognition.

24.  The method as recited in claim 16, further comprising the step of buffering the utterance to be

processed and maintaining the utterance in memory during processing of the utterance.

25.  The method as recited in claim 16, wherein the step of associating time segments of the word boundaries of the commands with a label includes employing grammars to associate a unique label with each command segment in the utterance.

26.  The method as recited in claim 25, wherein the label includes a numerical value.

27.  The method as recited in claim 25, wherein the grammars include a form for extracting information for an order or verbal contract.

28.  The method as recited in claim 25, wherein the grammars include a form for reminding a user to perform a task.

29. The method as recited in claim 25, wherein the grammars include a form for extracting maximum meaningful length segments under interruption or silence conditions.

30. The method as recited in claim 16, wherein the step of determining the acoustic word boundaries includes finding segment boundaries by iteratively comparing the same utterance to a plurality of vocabularies.

31. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for recognizing commands and voice data in a same utterance as recited in claim 16.

32. A system for recognizing commands and voice data in a same utterance comprising:

an acoustic input, which receives utterances;

a data buffer, which stores audio data representing the utterances;

a speech recognition engine, which matches portions of

the utterances to acoustic models and language models to
recognize words and word boundaries in the utterance and
labels commands in the utterance;

at least one program that executes label-identified

5   commands and processes remaining portions of the utterance

in accordance with the commands.

33.  The system as recited in claim 32, wherein the at
least one program includes a function which searches the

10  utterance for labels output from the speech recognition

engine to execute a command associated with the label.

34.  The system as recited in claim 32, wherein, in
accordance with each label, an audio segment is identified

15  and processed.

35.  The system as recited in claim 32, wherein the
speech recognition engine utilizes grammars with labels,
which the system uses for assigning labels to decoded

20  commands.

36.  The system as recited in claim 35, wherein the grammars are represented in Bachus-Naur Form (BNF).

5